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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/534,368

05/09/2005

Jun Ogura

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EXAMINER

CROW, ROBERT THOMAS

ART UNIT

PAPER NUMBER

1634

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<p align="center">Advisory Action Before the Filing of an Appeal Brief</p>	<p>Application No. 10/534,368</p>	<p>Applicant(s) OGURA ET AL.</p>	
	<p>Examiner Robert T. Crow</p>	<p>Art Unit 1634</p>	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 06 January 2009 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☒ They raise the issue of new matter (see NOTE below);
(c) ☒ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: None.
Claim(s) objected to: None.
Claim(s) rejected: 1,4,5,8,10-13 and 17-25.
Claim(s) withdrawn from consideration: None.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet.
12. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____.
13. ☐ Other: _____.

/Ram R. Shukla/
Supervisory Patent Examiner, Art Unit 1634

Continuation of 3. NOTE: Applicant has amended page 34 of the specification so that the top gate driver 11 is a means for applying a negative voltage "to each of the top gate electrodes." As noted in the previous Final Office Action, while the previous amendment "means for applying a negative voltage" appears to be an attempt at further describing top gate driver 11, the combined new recitation "means for applying a negative voltage to each of the top gate electrodes" is significantly broader in scope because the phrase encompasses structures other than the top gate driver. Because the scope of the phrase "means for applying a negative voltage" from the previous amendment is broader than the recitation of a top gate driver, the combination of the previous amendment "means for applying a negative voltage" and the new phrase "to each of the top gate electrodes" each constitute new matter.

It is further noted that claim 10 is drawn to a "means for applying negative voltage to each of the light-transmissive top gate electrodes." The recitation of the means plus function language "means for applying negative voltage to each of the light-transmissive top gate electrodes" utilizes the language of 35 USC § 112, Sixth Paragraph. Thus, the amendments to the specification limit the recited structure of claim 10 to the top gate driver described on page 34 of the specification. The specification as originally filed does not limit the claimed "means for applying negative voltage" to a gate driver; thus, the amendments introduce new matter to the specification because the amendments result in limiting the claimed "means for applying negative voltage" solely to a gate driver as a result of utilizing the means plus function language of 35 USC § 112, Sixth Paragraph.

Continuation of 11. does NOT place the application in condition for allowance because: Applicant's after-final arguments filed 6 January 2009 (hereafter the "Remarks") have been fully considered but they are not persuasive for the reason(s) listed below.

A. Applicant argues on page 12 of the Remarks that the structure as recited in amended independent claim 1 and in previously presented claim 10 is used to perform hybridization thereby capturing electrode holes having positive charges generated by the semiconductor layer, and repelling of the DNA probes by the negative voltage applied to the top gate electrode is prevented.

However, Applicant's arguments are solely directed to an intended use for the claimed DNA sensor. The courts have held that "while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function." *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997). In addition, "[A]pparatus claims cover what a device is, not what a device does." *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990) (emphasis in original). Because the prior art teaches the structural elements of the claim, the claim is obvious over the prior art. See MPEP § 2114.

B. Applicant argues on page 13 of the Remarks that Yamada does not teach adapting a field effect transistor to a DNA sensor.

However, as noted in the rejection, Yamada is relied upon for the transparent gate electrodes. It is the prior art of Hollis et al that is relied upon for a DNA sensor having photoelectric transistors integrated into the substrate. Yasuda et al is relied upon for a DNA sensor having a conductive layer. Yagi et al is relied upon for a light absorbing layer that selectively absorbs one wavelength of light and transmits another wavelength. Iwasa is relied upon for field effect transistors having a semiconductor layer of polysilicon. Thus, the combined prior art teaches all of the structural elements of the claims.

Thus, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

C. Applicant argues on page 13 of the Remarks that the prior art does not address prevention of hybridization by negative voltage applied to the top gate electrode.

However, as noted above, apparatus claims cover what a device is, not what a device does. Because the prior art teaches the structural elements of the claim, the claim is obvious over the prior art.

D. In response to applicant's argument on page 13 of the Remarks that there is no suggestion to combine the references of Hollis et al and Yamada, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Yamada teaches the known technique of using a transparent top gate electrode.

Thus, as noted in the previous rejections, it would have been obvious to the ordinary artisan that the known technique of using the transparent top gate electrode of Yamada could have been applied to the sensor of Hollis et al in view of Yasuda et al, Yagi, and Iwasa with predictable results because the known technique of using the transparent top gate electrode of Yamada predictably results in a reliable top gate electrode for a photoelectric device.

In addition, it is also noted that the Supreme Court ruling for *KSR Int'l Co. v. Teleflex, Inc* (No 04-1350 (US 30 April 2007)) forecloses the argument that a specific teaching, suggestion, or motivation is required to support a finding of obviousness. See *Ex parte Smith* (USPQ2d, slip op. at 20 (Bd. Pat. App. & Interf. June 25, 2007)).

E. In response to applicant's argument on page 13 of the Remarks that Iwasa is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the

applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Hollis et al teach DNA sensors comprising semiconductor layers and photoelectric transistors integrated into the substrate, and Iwasa teaches field effect transistors having semiconductor layers. Thus, both prior art references concern the same area of scientific inquiry; namely, semiconductor transistors.

F. Applicant argues on page 13 of the Remarks that Iwasa is not combinable with Hollis et al.

However, MPEP 716.01(c) makes clear that "[t]he arguments of counsel cannot take the place of evidence in the record" (*In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965)). Therefore, Applicant's arguments that Iwasa is not combinable with Hollis et al cannot take the place of evidence in the record.

It is noted that the Response above should not be construed as an invitation to file an after final declaration. See MPEP 715.09 [R-3].

G. Applicant's remaining arguments on pages 13-15 of the Remarks reiterate the argument that the cited prior art does not address prevention of hybridization by negative voltage applied to the top gate electrode.

However, as noted above, apparatus claims cover what a device is, not what a device does. Because the prior art teaches the structural elements of the claim, the claim is obvious over the prior art.

/Robert T. Crow/
Examiner, Art Unit 1634.